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TAB B - HANOI-SOUTHERN TERMINUS OF OPERABLE RAIL LINE

<u>Location</u>	<u>Target Number</u>	<u>Name</u>	<u>Date</u>	<u>Status</u>
20-32-50J 105-55-15E		Phu Ly RR Bridge over Song Lap (4 span 240' x 8')	7 Nov 65	Photography of 10 November revealed that two spans dropped on NNE end. NNE causeway separated from bridge, about 75' of causeway destroyed. Southernmost span appears twisted. By 10 November 65, bridge not operational, no reconstruction activity known. No later photo coverage available.

25X1

DIA review(s) completed.

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20-15-40N 105-59-20E		Ninh Binh RR/Hwy Bridge over Song Day (4 span 680' x 23')	15 June 65	Struck on 15 June. Photography of 15 June revealed southern span dropped from south pier into water; no apparent damage to approaches. Photography reveals no reconstruction attempts thru 24 July. Between 24 July and 21 September reconstruction of temporary deck bridging over dropped span started and progressed to advance stage of restoration to allow very light rail traffic. Operable status not achieved.
			26-27-30 Sept 65	Strikes did extremely minor damage. 1 Oct 65 photography shows temporary bridging slightly damaged. There have been no subsequent strikes and no more current photography available. It is estimated that by 10 Oct 65 the bridge could have been operational for lightly loaded rail cars, but not for train traffic or locomotives.

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Location	Target Number	Name	Date	Status
Hwy Route 1A		Dong Phuong Thuong RR/Hwy Br over Song Len	3 Apr 65	Center span collapsed and resting on river bottom. Immediate temporary reconstruction included deck span built on top of collapsed span. Observed as late as 23 May 65, operational status probably not obtained for rail traffic. Old highway ferry crossing, just east, renovated; additional ferry crossing constructed upstream. Floating bridge constructed about one mile upstream.
19-58-36N/ 105-50-54E		(3 span, 525' x 22' steel thru truss)		
25X1			25, 27, 28 May & 1 June	Southern span dropped and temporary deck span destroyed. No further reconstruction of this structure noted. As of 9 June, float bridge still in place.
			27 June	Northern span dropped and shifted downstream. As of 27 June, bridge completely useless. From early July to mid-August, no work done on 18.8. However, a roadbed for a by-pass was started. As of 13 July, the by-pass float bridge was still in place, approx. 1 mile from the target; used for pedestrian and cart traffic. Photography on 12 Sept revealed center piers of new by-pass bridge upstream from 18.8 were in place. Roadbed almost complete to bridge under construction.

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			25-27 Sept 65	Old bridge apparently restruct. Approaches cut. New by-pass bridge under construction apparently not struck. As of 8 Oct 65, transshipment facilities in place near target; consists of 3 loading ramps at water edge with rail spur nearby. By 6 Nov 65, new by-pass rail bridge (5 span, deck type) completed and operational. [redacted] As of 24 Nov 65, there were two ferry landings and a float bridge adjacent to the destroyed bridge.

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19 50 12N/ 105 47 56E		Than Hoa RR/Hwy Bridge over Song Ma (2 spans - 540' x 22' steel thru truss)	3-4 Apr	These strikes destroyed or severely damaged 75% of the highway lane on the south side of the bridge and approaches; 24% of the length of the north side highway lane. Structural damage to the truss and railbed rendered the bridge impassable to rail as well as vehicular traffic. By 26 April though still impassable for rail or vehicular traffic, good progress had been made on restoring the heavily damaged eastern road/rail approach. Temporary supports had been built up under the east end of the bridge to reinforce that portion of the span which suffered structural damage. Repair of damaged truss members is evident at several points.
			7 May	Restrike cratered the eastern approach severely; damage sustained by eastern portion of bridge; all spans on main truss remain up.
			31 May	Another strike produced light damage to abutment, all spans on main truss still up. It was estimated that vehicular traffic could use bridge on rail lane within one week and four weeks were needed to complete emergency reconstruction for rail usage.

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			1 Jun - 30 Aug	Although struck by armed Reconnaissance in June, and July no significant new damage to the bridge was noticed. By July a pontoon bridge for light traffic was installed on the south bank and remained as late as 10 November.
			13 Sep	Restruck on 13 September again no apparent new damage. By 15 September the highway lanes and suspension members were removed and rail lane decked for vehicular use.
			27-28 Sep	Restruck, no apparent new damage.
			29 Sep	Photography revealed that the bridge was serviceable for rail and vehicular use. No subsequent damage to bridge has been noted.

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19-15-45N/ 105-41-20E		Qui Vinh RR Bridge over Song Hoang Mai (352' x 22' type steel thru truss)	9 Apr 65	9 April photography confirmed that the HE span destroyed and dropped into river. East end of SW span possibly dropped into river and the approaches were destroyed. No subsequent attempts were made to restore this bridge to service. The structure remains unserviceable. Temporary by-pass bridge for light traffic constructed adjacent to old bridge. Photography on 17 Aug 65 reveals this bridge operational for extremely light traffic. Additionally 17 Aug photography revealed road bed was under construction and pile bent type piers were being emplaced for by-pass bridge located east of the old structure. A section of road bed construction west of the old bridge for another possible by-pass was also noted (17 Aug). Grading work on the western by-pass continued slowly and from 7 October to the present no additional work was done on this by-pass.
25X1			26, 27, 28, 29 & 30 Sep 65	Photography of 7 Oct revealed that strikes produced no additional structural damage to remaining span of old bridge and produced superficial damage to adjacent temporary bridge. Eastern approach cratered. Temporary bridge rendered unserviceable. Photography on 24 Oct 65 reveals that temporary bridge is still unserviceable. No known reconstruction attempted.

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<u>Location</u>	<u>Target Number</u>	<u>Name</u>	<u>Date</u>	<u>Status</u>
			13, 18, & 19 Nov 65	Strikes destroyed 70 feet of adjacent temporary bridge. Old bridge and temporary adjacent bridge not operational as of 2 November. Photography on 16 December could not be read because of cloud cover. Second by-pass bridge to the east which was revealed under construction in 17 Aug photography has possibly revealed operational status. 18 November photography [redacted] revealed that all spans but two have been completed. Rails and ties had been laid on the long side approach and spans while short side approach remains to be completed. The steel beams for completion of the remaining two spans were noted on the river bank. No known strikes have been mounted against this bridge [redacted]
			25X1	[redacted]
				25X1

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182137N 1053700E	185054N 1053915E		Tam Da RR/Hwy Bridge Ov Song Cua Lo (480 x 18 ft.; 3-span steel thru truss)	9 Apr (2 strikes)	Two of three spans destroyed, one span moderately damaged, 600 ft. south approach and 350 ft. north approach destroyed; highway approaches heavily cratered; bridge not operational. Ferry by-pass constructed west of bridge; ponton bridge U/C downstream was noted 16 September. No further strikes directed to target, no known reconstruction. Bridge not operational 13 December 1965. Possible by-pass road bed U/C revealed by 30 November and 13 December photography; status of ferry operation unknown.

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182137N 1053700E		Trai Hoi RR/Hwy Bridge Ov Ngan San (507 x 16 ft.; 4-span)	16 Apr	2 spans of 4 span bridge destroyed. One of remaining spans set askew on pier. Reconstruction activities unknown fording not feasible in vicinity, probable ferry in operation alongside bridge site.
25X1			7-13 May	Attacked, damage unknown. Ferry in operation near bridge site probably damaged. Photography on 20 June revealed that extensive reconstruction activity was in progress. Timber support trestles were noted and the water gap was closed by a pedestrian walkway.
			2-8 July	Attacked, approaches cratered. Further damage at this time is unknown. Subsequent strike data, not available. Photography on 17 Sept and 29 Sept revealed that all 4 spans of the bridge were out. No reconstruction or by-pass activities have been noted and on 13 Dec the bridge remains unserviceable. Highway appears to have been rerouted along east bank of Ngan San to new ferry crossing 1-2 miles below target bridge.

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180351N 1054920E		La Khe Thon RR Bridge Ov Ngan Sau	26 Apr	West span severely damaged both approaches interdicted. Not operational. Reconstruction activities between 26 Apr and 16 Aug are unknown.
25X1		(420 x 18 ft.; 8-span steel bridge)	16 Aug 6 Sep 2 Oct 7 Oct	West span dropped into river, next span severely damaged, steel structure on remaining spans twisted by blast. Additional damage to NW approach. Reconstruction activity noted 31 Oct 65 and on 17 Dec 65 bridge reconstruction had progressed to point where it is operable to light traffic only. No by-pass noted.

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